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09/421,806	10/20/1999	MARCUS WAGNER	1434P/BC9990	4629

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JUNTIMA, NITTAYA

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 05/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
Office Action Summary	09/421,806	WAGNER, MARCUS	
	Examiner	Art Unit	
	Nittaya Juntima	2663	(V)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/13/2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *8-13,16 and 26-31* is/are allowed.

6)☒ Claim(s) *1-7, 14-15, 17-25, 32-33, and 35-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *13 March 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

　　If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____ .

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

　　a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

DETAILED ACTION

This action is in response to the amendment filed on March 13, 2003.

1.   The objections to drawings and specification are withdrawn in view of applicant's

amendment.

2.   Claims 8-13, 16, 26-31, and 34 are allowed.

3.   Claims 1, 4, 17-19, 22, and 35-42 are rejected under 35 U.S.C. 102 (b).

4.   Claims 2-3, 5-7, 14-15, 20-21, 23-25, 32-33, and 43 are rejected under 35 U.S.C. 103 (a).

Claim Objections

5.   Claims 8, 10, 16, 26, 28, 34, and 43 are objected to because of the following

informalities:

-      in claim 8, lines 6 and 14, the words "LVS" and "GSF" should be spelled out to

avoid possible confusion over their meanings, and

                line 24, "transmissions" should be changed to "transmission;"

-      in claim 10, line 4, "transmissions" should be changed to "transmission," and

                line 10, "the" should be changed to "a;"

-      in claim 16, line 4, "transmissions" should be changed to "transmission,"

                line 8, the word "GSF" should be spelled out to avoid possible

confusion over its meaning, and

                line 17, "d3" should be changed to "c3;"

-      in claim 26, lines 7 and 15, the words "LVS" and "GSF" should be spelled out to

avoid possible confusion over their meanings;

- in claim 28, line 11, "the" should be changed to "a;"

- in claim 34, line 9, the word "GSF" should be spelled out to avoid possible

confusion over its meaning, and

line 18, "d3" should be changed to "c3;"

- in claim 43, line 5, "allocation" should be changed to "allocating," and

line 6, "an" should be changed to "the" and "may be allocated" should be

added after "bandwidth" to make the claim clearer.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1, 4, 17-19, 22, and **35-42** are rejected under 35 U.S.C. 102(b) as being anticipated

by Natarajan (USPN 5,742,594).

Per **claims 1, 39,** and **41,** Natarajan teaches a method for media delivery in a network,

comprising the steps of:

- *determining an available bandwidth* ($N(k+1)$) *for completion of a file transmission*

($d(i,k+1)$ is a bandwidth, i.e. time slots, needed by each user i to complete his/her non-real time

traffic which may include a file transmission as known in the art, see also col. 4, lines 1-27) *for a*

time interval (a time interval is not defined, therefore, reads on a number of time slots in a

transmission frame k+1, T(k+1), see also Fig. 2 and col. 3, lines 14-37) (N(k+1) is a total

bandwidth, i.e. time slots, available in frame k+1 for non-real time traffic classes and can be

determined by using eq. N(k+1) = T(k+1)-R(k+1)-C(k+1)-V(k+1), col. 3, lines 42-67 – col. 4,

lines 28-34); and

    - (claim 1 only) *allocating at least a portion of the available bandwidth (N(k+1)) to*

complete at least one file transmission task, wherein each of the at least one file transmission

task may be allocated a different amount of the available bandwidth (it is inherent that a

different amount of the available bandwidth, N(k+1), will be proportionally allocated to each of

the non-real time users for his/her at least one file transmission task according to each user's

demand and the size of N(k+1) and as a size of the at least one file transmission is not identified,

therefore, the at least one file transmission task of each user can be completely transmitted using

the allocated bandwidth if its bandwidth is less or equal to the allocated bandwidth and each of

the at least one file transmission task of each user may be allocated a different amount of the

available bandwidth, col. 4, lines 9-16 and see also col. 3, lines 16-26);

    - (claim 39 only) *allocating at least a portion of the available bandwidth to complete at*

least one file transmission task, wherein each of the at least one file transmission task may be

allocated a different amount of the available bandwidth (it is inherent that different amount of

the available bandwidth, N(k+1), will be proportionally allocated to each of the non-real time

users for his/her at least one file transmission task according to each user's demand and the size

of N(k+1) and since a size of the at least one file transmission is not identified, therefore, the at

least one file transmission task of each user can be completely transmitted using the allocated

bandwidth if its bandwidth is less or equal to the allocated bandwidth and each of the at least one

file transmission task of each user may be allocated different amount of the available bandwidth,

col. 4, lines 9-16 and see also col. 3, lines 16-26), *wherein the at least one file transmission task*

for each time interval is scheduled back-to-back (any remaining time slots, i.e. bandwidth, of

the total time slots requested by each user that were not processed in the preceding frame is

scheduled for process in the following frame, col. 6, lines 11-19 and 31-42);

     - (claim 41 only) *allocating at least a portion of the available bandwidth to complete at*

least one file transmission task, wherein each of the at least one file transmission task may be

allocated a different amount of the available bandwidth (it is inherent that a different amount of

the available bandwidth, N(k+1), will be proportionally allocated to each of the non-real time

users for his/her at least one file transmission task according to each user's demand and the size

of N(k+1) and since a size of the at least one file transmission is not identified, therefore, the at

least one file transmission task of each user can be completely transmitted using the allocated

bandwidth if its bandwidth is less or equal to the allocated bandwidth and each of the at least one

file transmission task of each user may be allocated different amount of the available bandwidth,

col. 4, lines 9-16 and see also col. 3, lines 16-26), *wherein the allocated available bandwidth*

varies as a polynomial in time (since the requested amount of bandwidth of each user as a

function of time is known throughout the time interval the request spans, therefore, the allocated

bandwidth for each user can inherently vary as a polynomial in time, col. 6, lines 11-19).

     Per **claim 4**, Natarajan further teaches *updating a total available bandwidth* (N(k+1)) *for*

the time interval and checking for the available bandwidth for completion of the file

transmission for the time interval (updating N(k+1) and checking for available bandwidth in

step 2 which is to be used to complete the non-real time traffic, i.e. file transmission, for frame

k+1, col. 4, lines 28-34, and see also col. 4, lines 35-38).

Per **claim 37**, Natarajan teaches a method for media delivery in a network,

comprising the steps of:

- *initializing a GSF* (T(k)), *wherein the GSF represents a total maximum bandwidth*

available in the network (ATM/B-ISDN network, Fig. 1, col. 2, lines 60-67-col. 3, lines 1-13) in

a time interval (a time interval is not defined, therefore, reads on a total number of time slots in

frame k, see also Fig. 2 and col. 3, lines 14-37) for completion of a file transmission (non-real

time traffic submitted by user i, col. 4, lines 9-3) (col. 3, lines 42-45 and col. 4, line 6);

- *updating the GSF* (N(k+1)) *based upon bandwidth requirements for a*

plurality of LVS jobs (C (k+1) and V(k+1)) *for a time interval* (a time interval is not defined,

therefore, reads on a total time slots in frame k+1, T(k+1), subtracted by time slots required for

video streams is updated and set to N(k+1), col. 4, lines 28-34, and see also col. 3, lines 2-3);

- *determining a size of at least one file transmission task* (Alloc (i,k)) *which*

can be completely transmitted during the time interval based upon the updated GSF (it is

inherent that a size of the time slots which yields a size of at least one file transmission task to be

allocated to each non-real time user i in frame k+1 to meet his/her demand, d(i,k+1), can be

determined through a simple modification of eq. Alloc (i,k), i.e. Alloc (i,k+1)= lesser of (integer

part of [f(i,k+1) * N(k+1)], d(i,k+1)), col. 4, lines 16-25, and see also col. 3, lines 26-34); and

- *allocating at least a portion of the updated GSF* (N(k+1)) *to complete the at least one*

file transmission task based upon the size and an allocation strategy (a predetermined

allocation scheme based on priority, col. 5, lines 43 – col. 6, lines 1-54), *wherein each of the at*

least one transmission task may be allocated a different amount of bandwidth (it is inherent

that a different amount of the updated bandwidth, N(k+1), will be proportionally allocated to

each of the non-real time users for his/her at least one file transmission task according to each

user's demand and the size of N(k+1) and as a size of the at least one file transmission is not

identified, therefore, the at least one file transmission task of each user can be completely

transmitted using the allocated bandwidth if its bandwidth is less or equal to the allocated

bandwidth and each of the at least one file transmission task of each user may be allocated

different amount of the available bandwidth, col. 4, lines 9-16, and see also col. 3, lines 16-26).

Per **claims 19, 22, 35-36, 38, 40,** and **42**, see previous office action.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-3 and **20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Natarajan (USPN 5,742,594) in view of Jamoussi et al. (USPN 6,128,280).

Per **claim 2**, Natarajan teaches *initializing a global step function* (GSF) (as known in the

art that each frame in the network has the same number of time slots, therefore, T(k+1) which

represents a total maximum bandwidth in frame k+1 (the time interval) is inherently initialized

through T(k), col. 3, lines 42-45 and col. 4, line 6) and *subtracting from the GSF bandwidth*

requirements for a plurality of on-going LVS jobs (requests from frame k) *and LVS jobs*

planned (new requests) *from a time of initialization to a maximum transmission duration* (col. 4, lines 28-38).

However, Natarajan fails to teach obtaining system configuration parameters from a database tables.

Jamoussi et al. teaches *obtaining system configuration parameters* (control processor and the IMAFP processor accessing the pool and system parameters) from a database tables (Figs. 2 and 3) (col. 3, lines 35-45).

Given the teaching of Jamoussi et al., it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate obtaining parameters from the database tables into the method of Natarajan as the database tables provide simple and systematic information storage and retrieval process for the parameters.

Per **claims 3** and **20-21**, see previous office action.

Claims 5-7 and **23-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan (USPN 5,742,594) in view of Jamoussi et al. (USPN 6,128,280).

Per **claims 5** and **6**, see previous office action.

Per **claim 7**, Natarajan teaches *subtracting from a GSF* (T(k+1)) the bandwidth requirements for the LVS jobs (T(k+1) which represents a total maximum time slots (bandwidth) available in the network in frame k+1 (time interval) for completion of each user i's non-real time traffic (the file transmission) is subtracted by time slots required for video streams and set to N(k+1), col. 4, lines 28-38, and see also col. 3, lines 2-3).

Per **claims 23-25,** see previous office action.

Claims 14-15, 32-33, and **43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan (USPN 5,742,594) in view of Caldara et al. (USPN 5,748,629).

Per **claim 14,** Natarajan does not teach freeing any allocated available bandwidth unused by a complete transmission of the at least one file transmission task.

However, Caldara et al. teaches *freeing* (made available) *any allocated available bandwidth unused* (allocated, unused) *by a complete transmission of the at least one file transmission task* (col. 7, lines 10-18).

Given the teaching of Caldara et al., it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the step of freeing up available any allocated unused bandwidth into the method of Natarajan to achieve high bandwidth utilization in the network which, in turn, will enable it to provide low-cost and highly efficient integrated services as taught by Caldara et al. (col. 1, lines 51-61).

Per **claim 15,** Natarajan teaches *updating a GSF* (T(k+1) which represents a total maximum time slots (bandwidth) available in the network in frame k+1 (time interval) for completion of each user i's non-real time traffic (the file transmission) is updated by subtracting time slots required for video streams and set to N(k+1), col. 4, lines 28-38, and see also col. 3, lines 2-3).

Caldara et al. teaches *constructing a payback strip* (unused allocated bandwidth) *from the portion of the available bandwidth allocated to the at least one file transmission task* (col. 7, lines 10-18), *adding the payback strip to the GSF* (any allocated unused bandwidth is added to the dynamic bandwidth, col. 7, lines 10-18), *and recording an available bandwidth*

remaining after the adding step in a plurality of database tables (Dynamic Bandwidth Lists)

(col. 7, lines 27-44).

Per **claims 32** and **33**, see previous office action.

Per **claim 43**, Natarajan teaches a system, comprising:

- *a server* (a microcomputer), *comprising a manager* (an allocation routine) *for file*

transmissions via a satellite transponder (a wireless communications link interface, Fig. 1, col.

2, lines 7-19 and 64 – col. 3, lines 1-4), *wherein the manager comprises a bandwidth allocation*

scheduler (a scheduler), *the bandwidth allocation scheduler capable of determining an*

available bandwidth ($N(k+1)$) *for completion of a file transmission* ($d(i,k+1)$ is a bandwidth,

i.e. time slots, needed by each user i to complete his/her non-real time traffic which may include

a file transmission as known in the art) for a time interval (a time interval is not defined,

therefore, reads on a number of time slots in a transmission frame k+1, $T(k+1)$, Fig. 2 and col. 3,

lines 14-37) ($N(k+1)$ is a total bandwidth, i.e. time slots, available in frame k+1 for non-real time

traffic and can be determined by using eq. $N(k+1) = T(k+1)-R(k+1)-C(k+1)-V(k+1)$, col. 3, lines

42-67 – col. 4, lines 1-34), *and allocating at least a portion of the available bandwidth to*

complete at least one file transmission task, wherein a different amount of the available

bandwidth may be allocated to each of a plurality of file transmission tasks (it is inherent that a

different amount of the available bandwidth, $N(k+1)$, will be proportionally allocated to each of

the non-real time users for his/her at least one file transmission task according to each user's

demand and the size of $N(k+1)$ and as a size of the at least one file transmission is not identified,

therefore, the at least one file transmission task of each user can be completely transmitted using

the allocated bandwidth if its bandwidth is less or equal to the allocated bandwidth and each of

the at least one file transmission task of each user may be allocated different amount of the

available bandwidth, col. 4, lines 9-16 and see also col. 3, lines 16-26, and col. 5, lines 43-61).

However, Natarajan does not teach a database table.

Caldara et al. teaches *a database table* (a Switch Allocation Table) *comprising*

information required by the manager for file transmissions (col. 6, lines 18-21).

Given the teaching of Caldara et al., it would have been obvious to a person of ordinary

skill in the art at the time the invention was made to incorporate a database table into the system

of Natarajan to manage the allocated bandwidth as taught by Caldara et al. (col. 6, lines 18-21).

Response to Arguments

8.   Applicant's arguments with respect to claims 1-7, 14-15, 17-25, 32-33, 35-36, and 37-43

have been considered but they are not persuasive.

a)   In the remarks, the applicant argues that the time interval in accordance with the present

invention is the time for the completion of a file transmission, not slots in a frame. In Natarajan,

to complete a file transmission, many slots in many frames would be required. Thus, Natarajan

teaches allocation based upon control over slots in the frame, while the present invention recites

allocation based upon a time for completion of a file transmission. In fact, the total number of

slots required to complete a file transmission in Natarajan is not known at the time of the slot

allocations, thus, allocation based upon a time for completion of the file transmission is not

possible.

In response, a time interval is not defined in the independent claims 1,19, and 37-42,

therefore, it reads on a number of time slots in a frame, for example, a frame has 50 time slots

where each time slots is 1 ms long, therefore, this frame occupies a time interval of 50 ms long

(see also Fig. 2 and col. 3, lines 14-37). Natarajan teaches an allocation routine that allocates

certain amount of time slots in a frame to the users' non-real time traffic classes. Each user

submits the required bandwidth for his/her non-real time applications which may include at least

one file transmission as known in the art (col. 1, lines 25-30), and the required bandwidth of each

user is converted into the required time slots where each time slot is capable of carrying a

quantity of information. The total time slots allocated for non-real time traffic classes in a frame

are then shared among the users proportionally to their required time slots. Further, even though

the exact size of a file transmission is not known, it is inherent that the size of a file transmission

of a particular non-real time user must be no greater than the required bandwidth (for example,

$d(i,k)$ for frame k) submitted by the user. Therefore, the file can be completely transmitted in a

time interval using the time slots allocated to the user (for example, Alloc (i,k) for frame k) by

the allocation routine of Natarajan (in a case where $Alloc(i,k) = d(i,k)$ for frame k, see col. 3,

lines 38-67-col. 4, lines 1-38) and Natarakan teaches the claimed limitations as cited in

independent claims 1, 19, and 37-42. It is noted that the features upon which applicant relies, i.e.

the time interval in accordance with the present invention is the time for the completions of a file

transmission, are not recited in the rejected claim(s). Although the claims are interpreted in light

of the specification, limitations from the specification are not read into the claims.

b)   In the remarks, the applicant argues that in addition, per amended independent claims 37

and 38, applicants respectfully disagrees with the examiner that $T(k)$ in Natarajan is analogous to

the global step function (GSF) in accordance with the present invention. The recited GSF

represent a total maximum bandwidth available in the network in a time interval for completion

of a file transmission. In contrast, T(k) in Natarajan represents the total number of slots in a

frame and does not address a total maximum bandwidth as claimed.

In response, again, a time interval in independent claims 37 and 38 is not defined,

therefore, it reads on a number of time slots in a frame where each time slot has a bandwidth that

can carry a quantity of information as known in the art (see also Fig. 2 and col. 3, lines 14-37).

T(k) in Natarajan is defined as total number of slots in Frame k (col. 3, lines 43), and therefore is

a total maximum bandwidth available in the ATM/B-ISDN network (Fig. 1, col. 2, lines 60-67-

col. 3, lines 1-13) in a time interval (time slots of Frame k) for completion of a file transmission

(required by the non-real time user i, see col. col. 3, lines 38-67-col. 4, lines 1-38).

c)   In remarks, the applicant argues that with regards to dependent claims 2-3, 5-7, 20-21,

and 23-25, applicant's arguments concerning Natarajan as applied to claims 1 and 19 apply here

with equal force. Thus, even if Jamoussi teaches the limitations as argued by the examiner,

Natarajan in view of Jamoussi still does not teach or suggest the claimed limitations as recited in

the combination of claims 1 with 2-3 and with 5-7, and 19 with 20-21 and with 23-25 of the

present invention.

In response, Natarajan teaches the claimed limitations of independent claims 1 and 19 as

explained in the response of part a). Further, the applicant failed to argue that Jamoussi does not

teach the limitations as argued by the examiner in the previous action and to point out the error in

the motivation in the rejection. Therefore, the rejection is maintained.

d)   In remarks, the applicant also argues that with regards to dependent claims 14-15, and 32-

33, applicant's arguments concerning Natarajan as applied to claims 1 and 19 apply here with

equal force. Thus, even if Caldara teaches the limitations as argued by the examiner, Natarajan

in view of Caldara still does not teach or suggest the claimed limitations as recited in the combination of claims 1 with 14-15, and 19 with 32-33 of the present invention.

In response, Natarajan teaches the claimed limitations of independent claims 1 and 19 as explained in the response of part a). Further, the applicant failed to argue that Caldara does not teach the limitations as argued by the examiner in the previous action and to point out the error in the motivation in the rejection. Therefore, the rejection is maintained.

e)   In remarks, the applicant further argues that amended independent claim 43 is allowable for at least the reasons set forth in applicant's arguments concerning Natarajan as applied to claims 1 and 19 above. Thus, even if Caldara teaches the limitations as argued by the examiner, Natarajan in view of Caldara still does not teach or suggest the claimed limitations as recited in the amended independent claim 43 of the present invention.

In response, Natarajan teaches the claimed limitations as recited in independent claims 1 and 19 as explained in the response of part a) which are now part of the amended claim 43. Further, the applicant failed to argue that Caldara does not teach the limitations as argued by the examiner in the previous action and to point out the error in the motivation in the rejection. Therefore, the rejection is maintained.

Conclusion

9.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
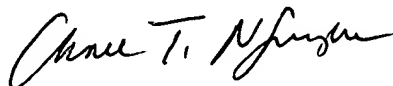
A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nittaya Juntima whose telephone number is 703-306-4821. The

examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-746-9408 for regular

communications and 703-827-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-305-3900.

Nittaya Juntima
May 21, 2003

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600